

Pediatric and Adult Influenza Webinar 2017-2018 Q&A

Timing of Influenza Vaccine

- Q) Can receiving the flu vaccine early result in decreased immunity at the end of the flu season?
- A) Protection from influenza vaccine is thought to persist up to a year because of waning antibodies and because of changes in the circulating influenza viruses from year to year. Antibody persistence may be shorter for person's aged 65 years and older.
- Q) How long does it take for flu vaccine to provide protection? What is the optimal time for patients to get vaccinated?
- A) It takes approximately 2 weeks after vaccination to build a full immune response. This is true for most vaccines. The best time to vaccinate someone against flu is as soon as you have received flu vaccine in your office. If you wait to vaccinate, that patient may not return and risks going unprotected this flu season. There is no way to predict when flu activity will start or peak in our communities, which is another reason why waiting until later in the season to vaccinate could be harmful.
- Q) If someone gets influenza this season, are they still recommended to get flu vaccine afterwards?
- A) Yes. Flu vaccines protect against 3 or 4 different strains of the influenza virus. Oftentimes, more than 1 flu virus strain circulates during the flu season so getting flu vaccine would still protect that person against the other strains.
- Q) Is there any evidence that the flu shot loses effectiveness over time during a season? The doctor I work with does not give flu shots until October 1st because she believes the flu shot only lasts 6 months.
- A) ACIP recommends to avoid missed opportunities for vaccination. Providers should offer flu vaccine during routine healthcare visits and hospitalizations as soon as it becomes available. Antibodies to inactivated flu vaccine decline in the months following vaccination. A study conducted during the 2011–12 flu season found a decline in vaccine effectiveness late in the influenza season, primarily affecting persons aged 65 years and older. While delaying vaccination might permit greater immunity later in the season, deferral could result in missed opportunities to vaccinate, as well as difficulties in vaccinating a large number of people within a more limited time period. It is important for vaccination programs to balance when you should give flu vaccine to maximize protection with avoiding the possibility of a missed opportunity and vaccinating when flu is already circulating in the community. The key is to get the vaccine in before exposure for the best protection. Remember, revaccination later in the season for those already fully vaccinated is not recommended.
- Q) We always wait until October 1st to start vaccinating patients with flu vaccine because of Meaningful Use requirements. Can you help address this?
- A) Please refer to <https://knowledgebase.practicefusion.com/knowledgebase/articles/484773>. This is a Merit-Based Incentive Payment System (MIPS) or for Medicaid EHR Incentive Program (Meaningful Use). This measurement is the “percentage of patients aged 6 months and older seen for a visit between October 1 and March 31 who received an influenza immunization OR who reported previous receipt of an influenza immunization.” The only patients counted in this measurement are those seen between October 1 and March 31. If a patient is seen October 1 at your office and previously received flu vaccine in September at another health care location, that patient would still be counted towards this Meaningful Use measurement as long as the historical flu vaccine is documented in the electronic medical record.

There is no reason to intentionally delay flu vaccination until October 1 for this reason. If a patient is

in your office prior to October 1 and you have an age-appropriate flu vaccine available, it is recommended to vaccinate rather than delay and miss a vaccine opportunity.

- Q) If I have a patient who would benefit with use of a longer eclipse needle (1.5”) on prefilled flu vaccine but I don’t have the needle, should I delay vaccination?
- A) Flu vaccine needs to be given intramuscular (IM). If it’s not given IM the dose needs to be repeated. Note: the only exceptions to this for this year’s available flu vaccines are intradermal flu vaccine and recombinant flu vaccine – for information on how to give IM and ID flu vaccines, refer to “Administering Influenza Vaccines (Intramuscular, Intranasal and Intradermal)” at www.michigan.gov/flu. Studies have shown decreased vaccine efficacy if flu vaccine intended for IM administration is not administered in the muscle.

If you feel that you will not hit the muscle with a 1” needle, then you should use a 1.5” needle. If you do not have a 1.5” needle available that day, then you should reschedule the patient to receive flu vaccine when you will have the correct needle size or refer them to another clinic or provider that you know has the correct needle size. We don’t want to miss an opportunity to vaccinate, but ultimately the vaccine needs to be administered correctly to have the most benefit to the patient.

It would be suggested that a 1.5” needle become part of your vaccine administration equipment. The reason for this is needle length for adolescents and adults will be based on gender and weight. The chart in the Pink Book chapter (see below) has a great reference for gender and weight.

Lastly, flu vaccine should be administered in the ACIP-recommended sites which are the deltoid (upper arm, preferred for ages 3 years and older) or vastus lateralis muscle (anterolateral thigh, preferred for 6 months through 2 years of age). Refer to the Pink Book chapter on Vaccine Administration at www.cdc.gov/vaccines/pubs/pinkbook/chapters.html.

Storage and Handling

- Q) Each flu season, it seems like a large number of vaccines are drawn up into syringes ahead of time and stored at room temperature for a few hours or refrigerated, even overnight. Does this affect potency and biological safety of flu vaccine? Is it ever safe to pre-draw doses of flu vaccine ahead of time?
- A) ACIP discourages pre-drawing doses of any vaccine. There is an increased risk for vaccine administration and dosing errors when you pre-draw. There is also concern with contamination and potential growth of microorganisms when pre-drawing vaccine. Syringes are not intended for vaccine storage. If you are using a prefilled syringe, once it’s activated by attaching a needle they can become contaminated if not used at that time.

If you must pre-draw flu vaccine during a flu clinic, do not draw up more than the contents of 1 multi-dose vial at a time. Any vaccine you pre-draw (and store at correct temperatures) must be discarded at the end of the clinic day if it is not used. CDC does not recommend drawing up vaccine doses days or even hours before a clinic. Do not draw up vaccines before arriving at the clinic site. Lastly, the person that draws up the vaccine should be the one to administer the vaccine.

Flu Vaccine & Pregnancy

- Q) Can flu vaccine be administered during any trimester of pregnancy?

- A) Yes. ACIP recommends any licensed, recommended, age-appropriate flu vaccine be administered to pregnant women at any time during pregnancy. Influenza can put pregnant women and their developing baby at an increased risk of serious illness, so it is important for healthcare providers to continue to recommend and offer flu vaccine to pregnant patients.

A recent [study](#) published in the journal *Vaccine* titled, “Association of spontaneous abortion with receipt of inactivated influenza vaccine containing H1N1pdm09 in 2010-11 and 2011-12” reported a potential safety signal with flu vaccination during the first trimester. This CDC-funded study found an association between spontaneous abortion and flu vaccination among women vaccinated during the first trimester of pregnancy with a flu vaccine containing the pandemic H1N1 component, who also had been vaccinated during the prior season with a flu vaccine containing the pandemic H1N1 component.

While this study found a potential safety signal with flu vaccination, there are important limitations to note. First, this study does not and cannot establish a causal relationship between repeated influenza vaccination and spontaneous abortions, and warrants further research.¹ Further, there may be issues with the data such as unidentified or unrecorded flu vaccinations. Experts have reviewed this data and continue to recommend flu vaccine for all pregnant women. The American College of Obstetricians and Gynecologists (ACOG) released a [statement](#) about the study, which emphasizes their continued recommendation for all pregnant women to get vaccinated against the flu.

- Q) Would you recommend a 38-week pregnant woman receive the flu shot now, or wait a couple of weeks until she delivers?
- A) Give her flu vaccine now. You do not want to miss an opportunity to vaccinate. We encourage you to vaccinate the woman now to provide protection prior to contact with the infant, and to give the infant protection through mom’s maternal antibodies. Remember, it takes approximately 2 weeks after vaccination to build a full immune response.
- Q) If a woman receives flu vaccine this upcoming season and becomes pregnant after receiving the vaccine, is it recommended for her to get another flu shot during the pregnancy?
- A) No, she only needs 1 dose of 2017-18 flu vaccine this season. There is no recommendation to revaccinate with another flu vaccine during pregnancy if she has already received a dose this season.

Egg Allergy & Recombinant Influenza Vaccine (RIV)

- Q) Does having an allergy to egg not matter anymore with regards to ACIP’s flu vaccine recommendation?
- A) This is the second year that ACIP has recommended egg-allergic persons receive flu vaccine with guidance on how to safely vaccinate them. If a person’s reaction to egg exposure is only hives, you may vaccinate with any recommended age-appropriate flu vaccine.

If a person’s reaction to egg is something other than hives (e.g. angioedema, respiratory distress, lightheadedness, recurrent emesis) or they required epinephrine or another emergency medical intervention, you should administer flu vaccine in an inpatient or outpatient medical setting under the supervision of a health care provider with experience managing allergic conditions. For more information on flu vaccine and egg allergy, refer to “2017-18 Flu Vaccine Screening for Persons who Report Egg Allergy” at www.michigan.gov/flu.

- Q) Some cultures do not allow for the ingestion of bugs or insects. If someone with these cultural beliefs asks about recombinant influenza vaccine (RIV), what should I tell them?
- A) RIV is the first flu vaccine that is produced from an insect virus and recombinant DNA technology. Why is it made from an insect cell line? This approach, as compared to traditional flu vaccines made using embryonated chickens' eggs, can help start flu vaccine production faster in the event of a flu pandemic.

For persons who are concerned, you can let them know that RIV is injected, not ingested. You can also let them know that the use of an insect virus to produce RIV is at the microscopic level, so they could see if their cultural leaders would approve of receipt of RIV due to the benefit it offers preventing influenza.

If the person still is unsure, let them know RIV is the only flu vaccine made using this technology. Any other age-appropriate flu vaccine could be administered.

- Q) Is there an age recommendation for Flublok® in regards to older adults? I thought if you were older than 50 years you couldn't receive Flublok®?
- A) In earlier flu seasons, Flublok® was only licensed for 18-49 years. Flublok® and Flublok® Quadrivalent are currently both recommended for use in persons aged 18 years and older. For more information on the different flu vaccine products available and the age indication for each, refer to "2017-18 Seasonal Influenza Vaccine Presentation Chart" at www.michigan.gov/flu.
- Q) If a patient has severe allergies to insect bites, is Flublok® contraindicated?
- A) No, an allergy to insect bites is not a contraindication to Flublok®. The only contraindication to RIV is previous severe allergic reaction to any component of the vaccine.

Vaccinating Persons with Underlying Medical Conditions

- Q) What is the recommendation for flu vaccine for diabetic patients?
- A) Persons with diabetes are at high risk for complications from influenza. Diabetics and anyone else with an underlying medical condition are recommended to receive flu vaccine every season. We want to make sure we are protecting persons at high risk from flu. For more information, refer to www.cdc.gov/vaccines/hcp/adults/downloads/fs-diabetes-vaccines.pdf.
- Q) Can flu vaccine be given safely to immunocompromised patients, such as those undergoing chemotherapy?
- A) Inactivated influenza vaccines (IIV) can be safely administered to persons who are immunocompromised even while they are undergoing chemotherapy. The immune response may not be as effective, but it is better for them to have some flu protection on board. It is extremely important that we protect immunocompromised persons from circulating flu viruses as they are more likely to have complications from influenza.

Live Attenuated Influenza Vaccine (LAIV)

- Q) Will nasal spray flu vaccine (LAIV, or FluMist®) be available this season if a person cannot receive the flu shot?
- A) The nasal spray flu vaccine will not be available this year. IIV can be given to persons who are healthy, are pregnant, have underlying medical conditions, and are immunosuppressed. FluMist® is a live virus vaccine and is contraindicated in persons who are pregnant, immunosuppressed, or who have an allergy to a component of the vaccine (for a full list of contraindications to LAIV, refer to the 2017-18 flu vaccine MMWR at www.cdc.gov/mmwr/volumes/66/rr/rr6602a1.htm).

FluMist® is not available this flu season as it was not recommended for use by ACIP. The only time a person is contraindicated to receive IIV is if they had a previous allergic reaction to a component of the vaccine or to a prior dose of IIV.

- Q) Will FluMist® be recommended and available in the future for patients?
- A) At this time, FluMist® is not recommended for use during the 2017-18 flu season. FluMist® continues to be studied to review available vaccine effectiveness data to determine if the vaccine can be recommended again in the United States.

Flu Vaccine Supply

- Q) Why do you think that pharmacies have received this year's flu vaccines before clinics?
- A) Honestly, we are unsure. This is a question for our manufacturers. However, we do know they ship all prebooked orders early, not just to CDC. This might have something to do with the distributors who are involved in the process. We are continuing to try and get VFC vaccines out earlier so that providers can encourage flu vaccine during back-to-school appointments with children.
- Q) When will providers receive Vaccines for Children (VFC) flu vaccine in the office?
- A) As of our Flu Webinar airing, the State of Michigan had already begun sending out our VFC flu vaccine to providers. As of September 27, the State of Michigan has received 85% of our total prebooked VFC flu vaccine order. We have received our VFC flu vaccine earlier than was initially expected this season. If you have any problems with VFC vaccine, please contact your local health department.

Flu Surveillance

- Q) Are there any predictions for the 2017-2018 flu season?
- A) It is impossible to predict the timing and severity of each flu season. We provide weekly surveillance updates in the [MI Flu Focus](#), so be looking for updates there as the season progresses.
- Q) Last year we had more positive influenza A and B cases than I have ever seen in the past 5 years, and more than 80% of those patients were vaccinated with the flu vaccine. Is there a reason for this?
- A) There are a few reasons why individuals who receive flu vaccine could still get lab-confirmed flu. First, it takes about 2 weeks after vaccination for the body to build a full immune response to the vaccine. So it's possible someone could get exposed to flu around the time of vaccination and still get infected because they haven't had a chance to build an immune response to the vaccine yet.

Second, the flu vaccine protects against either 3 or 4 strains of the flu virus. A person could become infected with a flu strain that was not in the vaccine they received. Third, how well-matched the flu vaccine virus strains are to the strains that are circulating in the community can impact the protection someone receives from the vaccine. In the 2016-17 flu season, the last full CDC FluView Surveillance Report was for the week ending May 20, 2017 (www.cdc.gov/flu/weekly/weeklyarchives2016-2017/Week20.htm). Under the Antigenic Characterization section, the percent of viruses that matched the 2016-17 vaccine components were: 99% for H1N1, nearly 95% for H3N2, 87% for B/Victoria-lineage viruses, and 100% for B/Yamagata-lineage viruses.

Lastly, how well the flu vaccine works depends on multiple factors, including the person's age and immune status. For past seasons' flu vaccine effectiveness data, visit www.cdc.gov/flu/professionals/vaccination/effectiveness-studies.htm. Data for the 2016-17

season were presented at the June 2017 ACIP meeting and can be found at www.cdc.gov/vaccines/acip/meetings/downloads/slides-2017-06/flu-03-ferdinands.pdf.

- Q) Is it recommended that we use CLIA waived flu tests this year? Or should we continue to diagnose based on symptoms only?
- A) The usefulness of rapid tests, including waived tests, depends on several factors. The predictive value of rapid tests changes as flu season progresses. Diagnosis based only on symptoms is more difficult at the beginning of the season and usually becomes the recommendation after confirmation that flu is definitely present in the community. Tests can be helpful during the early part of the season. It's important to be aware of the limitations of the specific test you choose to use. CDC provides further guidance on rapid influenza diagnostic tests: www.cdc.gov/flu/professionals/diagnosis/clinician_guidance_ridt.htm.

Tetanus, Diphtheria, Acellular Pertussis Vaccine (Tdap)

- Q) So a tetanus booster, not Tdap, should be administered every 10 years if Tdap has already been given once? We give Tdap every 10 years regardless.
- A) ACIP does not recommend more than 1 lifetime dose of Tdap for anyone except pregnant women. If a non-pregnant person has already received a dose of Tdap, the recommendation is they would receive a Td booster every 10 years thereafter. Pregnant women should receive a Tdap dose during every pregnancy, preferably during the early part of 27-36 weeks' gestation. If Tdap was not given to a woman before she was pregnant and if it was not given during pregnancy, then a Tdap dose should be given immediately postpartum. For more information on Tdap and Td recommendations, refer to www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/tdap-td.html.
- Q) Why is Tdap recommended during every pregnancy?
- A) Infants are very vulnerable to pertussis and are more likely to be hospitalized and die from pertussis infection. Tdap during pregnancy is truly the baby's first protection from pertussis. Tdap is recommended for pregnant women so her maternal antibodies will transfer to the fetus and provide protection before the baby is old enough to receive their first DTaP dose recommended at 2 months of age.
- Q) Is it recommended that all family members of a pregnant woman be vaccinated with Tdap even if they have received Tdap within the past 10 years?
- A) There is currently no recommendation for non-pregnant persons to receive more than 1 lifetime dose of Tdap vaccine. If family members or other close contacts of a pregnant woman have already received Tdap in their lifetime, there is no recommendation to be revaccinated with Tdap regardless of the interval since they received it. What's most important is ensuring everyone who will be around an infant has received an age-appropriate pertussis-containing vaccine if they are not currently up-to-date.

For more information on flu vaccine and MDHHS seasonal flu handouts, refer to www.michigan.gov/flu, click on "Current Flu Season Vaccination Materials for Health Care Professionals" and scroll down to "Influenza Vaccine Updates."

For the full 2017-18 ACIP flu vaccine recommendations, refer to the *MMWR* dated August 25, 2017 at www.cdc.gov/mmwr/volumes/66/rr/rr6602a1.htm.

1. Offit, P. (2017, Sept. 24). The pregnancy vaccine scare that should have never been. The Daily Beast. Retrieved from: www.thedailybeast.com/the-pregnancy-vaccine-scare-that-should-have-never-been